

REMARKS / DISCUSSION OF ISSUES

The present amendment is submitted in response to the Non-Final Office Action mailed August 31, 2010. In view of the amendments above and the remarks to follow, reconsideration and allowance of this application are respectfully requested.

Status of the Claims

Upon entry of the present amendment, claims 1-8, 12-13 and 26 will remain pending in this application. Claims 1 and 20 have been amended. Applicants respectfully submit that no new matter is added by the present amendments.

Claim Rejections under 35 U.S.C. § 112, first paragraph

Claims 5-6 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The rejection of claims 1-7, 12-13 and 20 are understood to be based on the premise that the specification disclosure as originally filed fails to provide support for the limitations “subsequently removing the removable protective transparent layer (L4) comprising: immersing the removable protective transparent layer (L4) in an immersion fluid without dissolving it, altering the solubility of the removable protective transparent layer (L4) after the immersion in the immersion fluid by a flood exposure at a different wavelength to the wavelength of the radiation and dissolving the removable protective transparent layer (L4)”, as presented in claim 1, and “subsequently removing the removable protective transparent layer (L4) comprising: immersing the removable protective transparent layer (L4) in an immersion fluid without dissolving it, altering the solubility of the removable protective transparent layer (L4) after the immersion in the immersion fluid by a post exposure bake process, and dissolving the removable protective transparent layer (L4)”, as presented in claim 20. Applicant has amended claims 1 and 20 by removing the language relating to subsequently removing the removable protective transparent layer (L4) comprising. Applicant appreciates that this removed step may have unintentionally mislead the Examiner into thinking that the removal step is performed before the exposure step, which is not the case. Accordingly, withdrawal of the rejections under 35 U.S.C. § 112, first paragraph is respectfully requested.

Claim Rejections under 35 U.S.C. §112, second paragraph

Claims 1-8 and 12-13 were rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The rejection of claims 1-8 and 12-13 is understood to be based on the premise that the claiming of “altering the solubility of the removable protective transparent layer after the immersion fluid by a flood exposure at a different wavelength to the wavelength of the exposure radiation, is unclear with the antecedent basis, “for the wavelength of the radiation” used in the step of projecting or otherwise. Applicant has amended claim 1 in a manner which is believed to overcome the rejection. In particular, claim 1 has been amended to unambiguously recite that “the wavelength of the radiation” refers to the electromagnetic radiation that is projected at a particular wavelength at said projecting step. Accordingly, withdrawal of the rejections under 35 U.S.C. § 112, second paragraph is respectfully requested.

Claim Rejections under 35 USC/ 103

In the Office Action, Claim 20 stands rejected under 35 U.S.C. §102 (b) as being anticipated by, or in the alternative, under 35 U.S.C. §103 (a) as being obvious over U.S. Patent Application No. 2005/0123863 (“Chang”). Applicant respectfully traverses the rejection.

Claim 20 has been amended to recite further features that are neither taught or suggested by Chang. Accordingly, the cited portions of Chang do not anticipate claim 20 because the cited portions of Chang do not teach every element of claim 20. For example, the cited portions of Chang do not teach or suggest, wherein the thickness of the removable protective transparent layer (L4) is greater than or equal to 200 nm, as in claim 20. In contrast to claim 20, Chang is silent with respect to the thickness of the protective layer 108. However, Chang discloses that the protective layer 108 is capable of preventing out-diffusion of the chemicals in the photoresist layer 106 into the immersion liquid and diffusion of the immersion liquid into the photoresist layer 106. Therefore, the immersion liquid will not be contaminated by the chemicals in the photoresist layer 106, and the properties of the photoresist layer 106 will not be altered by the immersion liquid. See Chang, par. 24. It is

therefore respectfully submitted that the protective coating layer 108 can be very thin as long as it serves its intended purpose as a chemical barrier. Further, all of the Figures of Chang suggest a thin layer. In contrast to Chang, the immersion pellicle of the invention serves a different purpose than the protective coating of Chang. Specifically, the purpose of the immersion pellicle is to defocus particles and gas bubbles in the immersion fluid to prevent them from printing during exposure as exposure defects. Accordingly, the thickness of the immersion pellicle is very important and should be thick enough to prevent printing. Therefore claim 20 is allowable.

New Claims

New Claim 21-26 recite additional features not disclosed or suggested by Chang. For example, Claims 21-23 recite that the wherein the thickness of the removable transparent layer of claim 1 is greater than or equal to 500 nm, 1 micron and 5 microns, respectively. Similarly, Claims 24-26 recite that the wherein the thickness of the removable transparent layer of claim 20 is greater than or equal to 500 nm, 1 micron and 5 microns, respectively. The cited portions of Chang fail to disclose or suggest the above features. Hence, new claims 21-26 are allowable.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-8, 12-13 and 20 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Mike Belk, Esq., Intellectual Property Counsel, Philips Electronics North America, at 914-333-9653.

Respectfully submitted,



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